July 1975
Vol. 6 San Antonio Radio Club No.5

BULL-ETIN

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Meets first and third Fridays at 7:30 P.M. at the Red Cross Building, 90 Brees St. ALL who have an interest in amateur radio are cordially invited to attend.

Bull-etin Editor, Dean Davis W5BGE Asst. Ed., Maybelle Davis
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Letters to the editor should be addressed to 1518 Santa Anna, San Antonio, Texas 78201

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By The WAY

By WA5QHG Bill Way

". . . and a great Field Day was had by all . . ." A few chiggers, ticks and mosquitoes, but Field Day was gr-r-reat! Many thanks to all who participated to make it such a success!

Special appreciation goes to the FD committee, chaired by Corky WB5CIT, with his able assistant chairpersons: Advisor, Frank W5QMH; Breakfast, Bob WN5MCJ; Fuel, Tommy WB5LOR; Finances, Frank WA5VFM; Swapfest, John WB5GUV (representing SARO); Site chairpersons: 2m fone, W5PKK; 6m fone and CW, Carl WA5LIX; 15 fone, Robert WA5JDU; 20m CW, Roy W5EYB; 20m fone, the Alamo YLs, headed by Barbara WB5GAH; 40m fone, New Braunfels H. S. Radio Club supervised by Larry WA5VTT; 40 CW, Joe WA5OMB; 75m fone, Ivan WA5RNV; misc. bands (160 CW, 80 CW, 15 CW, 10 fone and CW) J. D. WB5MXJ; Novice site, Bob WN5MCJ.

Corky has asked me to relay his thanks to the entire group, not only for their participation and cooperation but for their excellent job in cleaning up the sites at the conclusion. The Park Rangers made a special effort to complement the group on the manner in which they handled themselves and the park camping area itself.

Special thanks to the San Antonio Repeater Organization for their assistance, also for the "muy bueno" tamales and keg of Beer.

Finally a special citation to the Breakfast Crew! Head Chef Bob WN5MCJ, Mike WN5OKK, Jim WN5NOR, Gayle WB5MMI, Jim K5CDT, Earl WN5MQO and John WN5NUK set out a "mean" plate of pancakes and sausages, an enjoyable treat for those who spent the night. Well, Bob, the 40 or more, you and your crew served, all insist that this become an annual FD affair!

Personal observation--participation, enjoyment, size, almost all phases of FD, become better each year. Thanks to all, for your cooperation. 73, Bill WA5QHG

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(Editors Note: Additional FD infomation , see page 5.)

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WARNING! DO NOT, under any circumstances, transmit while gas is being pumped into your car. Several police cars have been lost doing just that. The pump nozzle is a good 1/4 wave antenna on 2 meters.
(via Indianna MARS Bulletin, de Texas Lone Star MARS Bulletin.)

Technical Topics

By W5LEM CAL GRAF

During the middle of June, your reporter was honored by being able to go along on an aircraft flight that flew around the north geographic pole. Prior to being retired to the happy hunting grounds of all good C-118 4-engine aircraft at Davis-Monthan, Arizona, the Air Force Security Service comand bird made one last memorable flight--a trip to the Arctic. The trip was chartered as a scientific and climatological endeavor and we picked the 3 days of summer no matter where we went.

There were 17 passengers and a crew of 11 when we left Kelly AFB and headed for Ft. Churchill, Canada, non-stop. Churchill is on Hudson Bay and is famous in the movies for the Hudson Bay Company and the romantic Mounties such as Nelson Eddy who used to sing "When I'm Calling CQ Will You Answer " I visited the rocket range where daily Nike-Zeus were shot into the ionosphere during the IGY in 57-58. This is also the end of the tree line and north of Churchill no trees grow. None of the trees had any branches which faced north due to weathering conditions.

Ft. Churchill received their TV programs via satellite in a geostationary orbit over the equator. A 28 ft. receiving dish was pointed low at about 10 degrees in order to see the satellite in orbit at 22,000 miles above the earth at the equator. The TV station being relayed was Vancouver, B.C., 3 hours to the west so that the late movie came on at 0300 Churchill time.

On the way to the geomagnetic pole, we set down at Resolute Bay on Cornwallis Island, which is the closest inhabited site near the magnetic north pole. They also had a TV relay via satellite and their antenna dish was aimed about 5 degrees above the horizon and you can't get much lower than that and have signal left as it passes through too much of the atmosphere.

On the way to Thule, Greenland, we flew around the magnetic pole which is actually on Bathurst Island and about 14 degrees south of the geographic north pole about 900 miles away. I had made up a vertical compass using a magnetized staple and a piece of thread to see if it would dip at the magnetic pole but the aircraft structure had too much of an influence and it never did dip properly the way it is supposed to. The aircraft magnetic compass spun about wildly and both of them pointed in the wrong direction as we left the pole for Thule.

At Thule we were lucky and landed there during their few nice summer days. The highs were about 40 degrees F and the low about 35 F. There is not much day to night change because the sun is always above the horizon from about February until September of each year. The lowest the sun went was about 15 degrees above the horizon and the highest it went was about 20 degrees, so that it just made a long swinging, low circle on the horizon. Thule has only about 40 inches of snow per year (New York state about 140 inches per year) and with its rainfall averages only about 11 inches per year. It is thus classed as a desert and there are no trees and only a few wild flowers. most of the people are from Denmark and there are a few Eskimos with their dog sleds.

BMEWS radar site no. 1 is located at Thule and its four high antennas have been looking over the pole for 15 years now. The antennas were designed to withstand 150 mph winds and that sounds like a lot of wind. But not too far from the site, a whopping 207 mph was recorded before the instrument blew away. Even the wind generated at a SARC boiled-owl party can't tie that kind of record!

On June 18 we flew around the north pole. We were about 7000 feet and I never did recognize the place. No barber pole, no red-nosed Rudolph, no big N (neither was there a big plus at the magnetic pole), just ice and more ice.

From Thule we flew on to Keflavik, Iceland, which looks like an extinct volcano. From Iceland we flew by way of Sondestrom, Greenland, to Goosebay, Labrador, where once again after a weeks time we had something less than a 24 hour day of daylight. Without seeing nary a goose, we left Goosebay for Washington, D.C., and then for Kelly where we completed 3 days of fast moving. We had been airborne for a total of 60 hours and that is a lot of sittin and gitten.

Regards for now, Cal Graf W5LFM.

CLAY COMMENTS

A TWO TRANSISTOR WIDEBAND AMPLIFIER

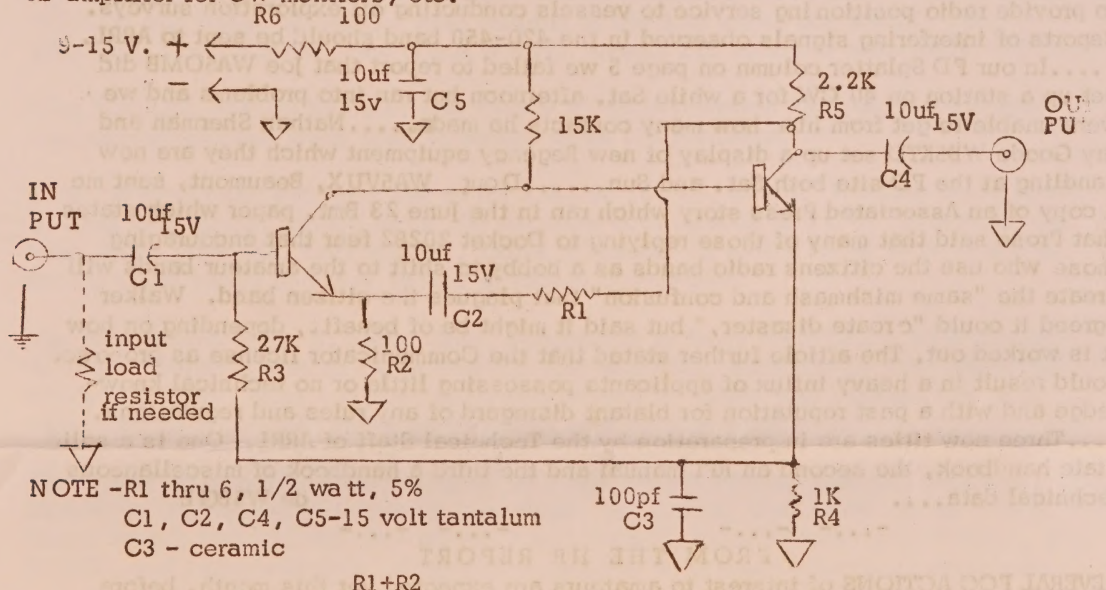
By W5ZPV CLAY LASTER

While researching literature for a wideband amplifier for a frequency counter, I ran across an article in May 72 CQ by A. B. Hutchison entitled "General Purpose Wideband Amplifier." The simplicity of a two transistor amplifier which could provide a flat gain characteristic up to 250 mHz with about 3 DB gain or 10 DB at 120 mHz had intrigued me. Although I have not completed the construction of this amplifier, I beleive that it may be of interest to many hams in the San Antonio Radio Club.

The circuit of the amplifier is shown in the schematic below. The two transisters are 2N5126 or 2N818. Substitutions could probably be developed by experimenting with circuit parameters. The first transister, Q1, is a conventional common emitter amplifier with the bias being determined by the voltage drop of the Q2 transister. This introduces a negative DC feedback voltage which compensates for power supply and temperature variations. Transister Q2 is a direct coupled amplifier with a maximum open circuit gain of about 6 DB. The negative feedback circuit (R1 and C2) directly controls the maximum frequency response upper limit and indirectly the gain. The gain of the overall circuit is determined by the ratio of R1 and R2. With R1 open circuit (or infinity), the gain of the wideband amplifier is approximately 40 DB and the upper frequency response is approximately 40 DB. I recommend that a 10K ohm potentiometer be used to initially establish the required gain for a particular circuit use.

The author reported that with a gain of 20 DB, the frequency response was within 1/4 to 1/2 DB across the frequency range to about 100 mHz. Several of these amplifiers could be connected in cascade when the total circuit gain is over 60DB. Three amplifiers, each with 20 DB gain, provide a total gain of 60 DB and will handle signals up to 400 microvolts input before the last stage overloads. Shielding and power supply filtering should be used when such a combination is employed.

Uses for this amplifier include: wideband oscilloscope amplifiers, wideband pre-amp, RF amplifier for CW monitors, etc.



NOTE -R1 thru 6, 1/2 watt, 5%
C1, C2, C4, C5-15 volt tantalum
C3 - ceramic

Voltage Gain $\simeq \frac{R1+R2}{R2}$

Maximum useable Gain ≃ 38 to 44 DB

Maximum output voltage ≃ 1.0 V P-P

Input/Output Impedances ≃ 1000 ohms

73, Clay W5ZPV.

SILENT KEY — Carl Porter, W5SLF, a member of SARC, has joined the rank of Silent Key. Carl, 49 years old, suffered a fatal heart attack July 1. Carl lived in SA 5 yrs. & was active on 15 & 20, both CW & phone.

TEXAS VHF-FM SOCIETY SUMMER CONVENTION 1975

The Temple VHF Repeater Association invites all amateurs to attend the Texas VHF-FM Society Summer Convention '75. The convention will be held at the Ponderosa Inn in Temple, Texas, August 1, 2 and 3.

Program Highlights: Featured speaker, A. Prose Walker, W4BW, Chief of the Amateur and Citizen's Division of the FCC. ....Swapfest: Bring your card tables and all your goodies to sell. .....Manufacturer's exhibits and equipment displays. .... TIRS (Texas Intercity Relay System) workshop and demonstration. .....Repeater control and autopatch workshop. .....220 mHz workshop. ..... Frequency coordination meeting.

Women's Activities: A tour of historical Salado by bus. Stroll the banks of Salado Creek and view the artwork of 150 artists. Lemonade under the giant oaks at Tyler House. Pre-registration, please. ....Coffee and door prizes on Sunday.

Prizes and other activites: Pre-registration Prize, Motorola Metrum II 25-watt 2-meter transceiver. .....Special Contributor's Prize, ICOM IC-230 fully synthesized 2 meter transceiver. ....Prize Drawings for many other smaller prizes will be held throughout both days of the convention. ....Hospitality Rooms. ....and Much More!

For more information write the Temple VHF Repeater Assoc. P.O. Box 23 Temple, Texas, 76501

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FOR SALE--Galaxy 5 MK III xcvr, 500 PEP SSB and 300 CW, VOX and 25 Kc calibrator, HD AC400 PS. All A1 operating condition--$300. Also available Galaxy matching console w/patch, speaker, rel/pwr SWR and Galaxy 2000B linear. James Dunn WA5YEA, 625 0755, 11 Ohio Avenue, New Braunfels, Tx., 78130.

FOR SALE--SB 102 Heathkit, 400 Hz filter, SB 600 PS, SWR meter, 40 m ant., and other goodies all like new--$400. Jack Skiles WN5KVP, 826 3079.

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SPLATTER-----By W5BGE

A public notice from FCC reports that Offshore Navigation, Inc of Harhan, La., has been granted a construction permit and license for a new fixed experimental development station to operate on various discrete frequencies between 230 and 445 mHz, to test and modify Shoran equipment used in overseas assignments to provide radio positioning service to vessels conducting oil exploration surveys. Reports of interfering signals observed in the 420-450 band should be sent to ARRL. .....In our FD Splatter column on page 5 we failed to report that Joe WA5OMB did set up a station on 40 CW for a while Sat. afternoon but ran into problems and we were unable to get from him how many contacts he made.....Nathan Sherman and Jay Goode WB5KTD set up a display of new Regency equipment which they are now handling at the FD site both Sat. and Sun.....Doug WA5VUX, Beaumont, sent me a copy of an Associated Press story which ran in the June 23 Bmt. paper which states that Prose said that many of those replying to Docket 20282 fear that encouraging those who use the citizens radio bands as a hobby to shift to the amateur bands will create the "same mishmash and confusion" that plagues the citizen band. Walker agreed it could "create disaster," but said it might be of benefit, depending on how it is worked out. The article further stated that the Communicator license as proposed could result in a heavy influx of applicants possessing little or no technical knowledge and with a past reputation for blatant disregard of any rules and regulations. ....Three new titles are in preparation by the Technical Staff of ARRL. One is a solid state handbook, the second an RFI manual and the third a handbook of miscellaneous technical data....

de W5BGE

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FROM THE HR REPORT

SEVERAL FCC ACTIONS of interest to amateurs are expected yet this month, before the commissioners take their August recess.

Extras Requesting Specific Callsigns, Docket 20092, has been reported about ready for commissioner consideration so a Report and Order on it is probable in the next few weeks.

CB Class D Restructuring, Docket 20120, is also expected to see light during July as predicted by Special Services Bureau Chief Higginbotham. It will be interesting to see if the promised enforcement "teeth" come along with it.

Finally, "Exotic Emissions," the long-awaited Docket proposing regulation of facsimile, wideband television, pulse, digital, multiplex and other "exotic" transmission modes is pretty well set, will probably receive commissioner nod for release as a Notice of Proposed Rule Making before the month is out.

SAN ANTONIO RADIO CLUB PROGRAM SCHEDULE

18 July--Home Brew Nite. Please, all you amateurs that have constructed some gadget, device, rig, etc., bring it to demonstrate or show to the club.

1 Aug--We are hoping to have George W5VPQ give a talk on frequency meters.

15 Aug.--The San Antonio Police Department will provide a film on burglary and theft and how to avoid this happening to you. Should be very interesting to amateurs as it will help us protect our amateur rigs as well as other valuable property.

September--We are trying to get an amateur Swapfest set up during this month. We will provide additional details later. However, you can be thinking about what old rig or piece of test equipment (or any old gadget) that you may wa to pawn off on your best friend.

de Clay W5ZPV, Program Chairman

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FIELD DAY SPLATTER By Dean W5BGE

The rain in SA proper kept some from attending the FD activite however at the site itself we had no rain to speak of. It has been estimated that some 200 or more were in attendance. The bands stayed open most of the time and kept most of the operators busy. Quite a bit of gear exchanged hands at the Swapfest, which was helped considerably by the hot tamales and beer.

The most outstanding area was the the activity in the Novice site--they went all out. Sparkpluged by Bob WN 5MC J and assisted by Mike WN5OKK, Jim WN5NOR, Tucker WN 5MLC, Tommy WN5MFO, John WN 5N U K, Randy WN 5LPN, Charlie WN 5LO W, and Earl WN 5MQ O. Their campsite was a bee hive of action. They accounted for nearly 100 contacts on 40 CW.

The 2m site was handled by Bob W5PKK, assisted by Chuck WB5FWI, Oly W5BDN, ED WA5ZEG and others, Nearly 80 contacts were made on 2 meters.

Again 15 fone led the field with nearly 650 contacts. Robert WA5JDU along with George WB5LDN were chief operators, assisted by Chris WN5LKQ, Jim K5UKN, Duke K5ZJA, Bill WA5QHG, Jim W5CDT, Bob Osborn, Bob Sarvis, and David Simon.

A featured attraction was the Alamo YLs, headed by Barbara WB5GAH. Operators who assisted her were: Ruth K5OPT, Beverly WA5AKA, Aileen K5OPV, Inez W5WXT, Linda WB5LEN and Peggy WA5GZO. Also helping at the site were: Don K5ALK, Larry WB5GVD, Larry WA5PAF, and Gene W5EJT. Nearly 225 contacts were made--20 fone

Ivan WA5RNV, Aubrey K5MO F, and Tommy WB5LOR operated 75 fone, tho not open Saturday afternoon, were able to secure some 175 contacts.

J. D. WB5MXJ and his crew set up for 160, 80 15, 10, and 6. Working these bands at their best times, gained some 150 contacts both on fone and CW. Assisting him were Ricky WB5OBG, Carl WA5LIX, Tanya WB5MXK. It took a lot of work to set up for all these bands and they should be highly commended!

The New Braunfels H. S. Radio Club, supervised by Larry WA5VTT,set up a site on 40 fone. Other operators were WB5LUS and WA5WNA, assisted by John WN 5MKW, Randy WN 5LPN, Billy WN 5OOJ and Felix WN5NED. SARC was pleased that they came over to SA to help and hope they will join us next year.

The QCWA group again operated 20 m CW. Roy W5EYB was in charge of this site. Operators who assisted included: Les W5BE, Bill K5TSR, Jack W5PF, Gene W5EJT, Jimmy W5JC, Dan W5DUI, Irv W5UB, Floyd W5JKU, Dean W5BGE, Jerry W5KLV, Bob W5PKK, and Larry WB5GVD. Nearly 300 contacts were made--fair band conditions.

A highlight of the FD operation was the breakfast prepared by Bob WN5MCJ and his crew. This has been covered in the By the Way column on page one but we thought it should be mentioned again because it sure tasted good Sunday morning!

The mosquitoes, chiggers and ticks did not bother us and we were able to sleep some parts of Saturday night when we we re not operating. The weather held off from raining, it wa s fairly cool and cloudy. So all in all it turned out to be a sucessful weekend.

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WANTED--TA33 tribander or equiv. George WN8SRT/5 824 4319.

ARRL Gnl Mgr Dick Baldwin reports that membership has increased from 112,382 at year-end to 118,192 at the end of June, 1975. In my news-letter of recent date I used end of 1974 figures in quoting our West Gulf Division statistics. The recently received membership roster makes the picture look even better as we now have a total of 6402 members in the division, an increase of approximately 33-1/3 % in the past 6½ years!

Three new manuals are in process of preparation by the League's Technical staff. One is a solid-state handbook, the second an RFI manual, and the third a handbook of miscellaneous technical data. Estimated publication date for the solid-state handbook is next summer, while the other two titles should be ready late this fall.

Offshore Navigation, Inc., of Harahan, La., has been granted a construction permit and license for a new fixed experimental developmental station to operate on various discrete frequencies between 230 and 445 Mhz, to test and modify Shoran equipment used in overseas assignments to provide radio positioning service to vessels conducting oil exploration surveys. Reports of interfering signals observed in the 420-450 band should be sent to ARRL Headquarters.

We are informed that headquarters is completely sold out of the hard-cover copies of the 1975 Handbook. Paperback copies will also probably be sold out before the 1976 edition appears.

A call from league General Counsel Bob Booth informs us the ARRL response to Docket 20282 entails approximately 100 pages, plus appendices, in order to insure that FCC understands the League's position on the docket. We certainly hope the response of 56,000 league members, combined with the judgment and experience of the 16 directors and the headquarters staff, is given careful consideration by the Commission. Most certainly if those gentlemen believe in the rules of logic they cannot help but consider this filing their best available information on the subject of restructuring.

Names make news - Please report your activities to the SCM on the first of each month. What YOU are doing is of interest to many of us. Address of SCM appears on QST page 6, each month.

SMIRK #1 (Ray Clark, K5ZMS) reports that SMIRK (Six Meter International Radio Klub) continues to grow like mad. Membership now over 960, and is expected to top 1,000 within the next month or so.

San Antonio Chapter of Quarter Century Wireless Association advises their annual picnic and camp-out will again be held at Canyon Park, Canyon Lake, the last Saturday of this month, July 26. Visitors are welcome. Bring your own food, etc. F/info see Les, W5BE, 698-2215.

In addition to other activities announced in my news-letter add the following: Central States VHF Society Convention (VHF DXers) Weekend of August 15,16,17, Western Hills Lodge, Wagoner, Oklahoma. Golden Spread Swapfest, Villa Inn Motel, Amarillo, Texas, Saturday and Sunday, August 23, 24.

Observing the recent balloon ascension at Hemisfair Plaza was an exciting experience. It immediately created a desire to have someone carry up a 2-meter walkie-talkie on one of those flights for some balloon mobile dx-ing. Seems that we read some time ago where balloonists gather at Albuquerque, NM, each year for mass flights. Does anyone have any info on that? If so, please pass the word along to me.

With the hurricane season soon to be upon us, shouldn't we have a meeting of all South Texas Emergency Coordinators early next month in order to coordinate communications for the hurricane season? It appears such a meeting could be held in San Antonio because of our central location in the section. SCM, SEC, and SARC club president please note.

Hal Sears, W5NC, long-time faithful and active ARRL member has been nominated for director of QCWA. Let's give Hal 100% support.

June issue of THE QCWA NEWS contains an article by W. Gulf Div Asst Dir Ted Heithecker, W5EJ, which we consider of interest to newcomers and oldtimers alike. We are taking the liberty of reproducing the entire article on the following page.

THE OLD TIMERS' CORNER
By W5EJ

In the process of learning to investigate the records and finding the first calls assigned to nearly 1000 old-timers during the past 5 years, we've become aware that there are many real facts concerning early day licensing that are not well known. To help clear up some of the misconceptions and mis-information that is pretty well normal throughout the old-timers ranks, we have looked up information on what really happened back around World War I - facts on the cut-off of amateur activities and facts on when such activities were resumed. Here is about what happened back in the really pioneer days of Amateur Radio - days of the quenched gap, the Ford coils, and ozone sniffing.

The United States became officially involved in World War I in April of 1917. As a result of that involvement, and in the preceding interval of uneasy peace, the U.S. Navy Department took two official actions. The first was the elimination of issuing new Amateur licenses, and the second was the order which authorized police and military personnel to actually supervise the dismantling of Amateur equipment. Let us quote the exact order.

From "THE WIRELESS AGE," Vol. 4, no. 8, dated April, 1917 comes this announcement of the termination of all Amateur activity during World War I.

"Acting under instructions from the Navy Department at Washington, on April 8, 1917, the military and police authorities throughout the country began dismantling all sets of wireless apparatus with exception of those used by the Government or under the direct supervision of the United States officials."

Previously, on March 28, 1917, Secretary of Commerce Redfield ordered as a precautionary measure, that no further licenses were to be issued for the operation of Amateur wireless stations until further notice.

The order barring Amateur Operations, even to the point of listening, was in effect throughout World-War I. Upon the collapse of Germany, there was a great deal of unrest among Amateurs, most of whom spent the war years in the Army or Navy and who were most anxious to begin Amateur operations again. The Navy Department was loath to release the airwaves to Amateur use, feeling that Radio Communications would be more orderly under control of the military. However, as a result of the activities of the young ARRL, and other interested and active groups, the Navy did agree to release the airwaves upon the official announcement that the United States was no longer in a state of war.

On September 26, 1919, the Navy Department issued a statement which did authorize the beginning of Amateur operations:

> "The Secretary of the Navy authorizes the announcement that effective October 1, 1919, all restrictions on Amateurs and Amateur radio stations are removed. ... Attention is invited to the fact that all licensees for transmitting stations have expired and that it will be necessary for the amateurs to apply to the Commissioner of Navigation, Department of Commerce, for new licenses..."

This was it! At long last the lid was lifted, and it was expected that Amateurs would go wild, and in the main their joy was unalloyed.

It is interesting to note that all licenses had expired. As of October 1, 1919, the slate was clean; there were no licensed Amateur stations in existence, now were there any pending applications. So it was a new ball-game from that time forward.

Since nearly all Amateurs had been active in the military during the war, ARRL had ceased publication, as had the NAWA and others who had catered to Amateur activities before the 1917 shut-down. With the end of hostilities ARRL began publication of QST (he means resuming publication- Roy). It was a touch-and-go situation. Finances were nearly zero and the organization was forced to request loans from its members. The loans were just that - loans, to be paid back with interest when ARRL finally became solvent.

What a fight those pioneers who bequeathed us our frequencies made!

Ted, W5EJ.

Congratulations to Ted on a most interesting article.
73, Roy L. Albright, W5EYB, Director, West Gulf Division ARRL.

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